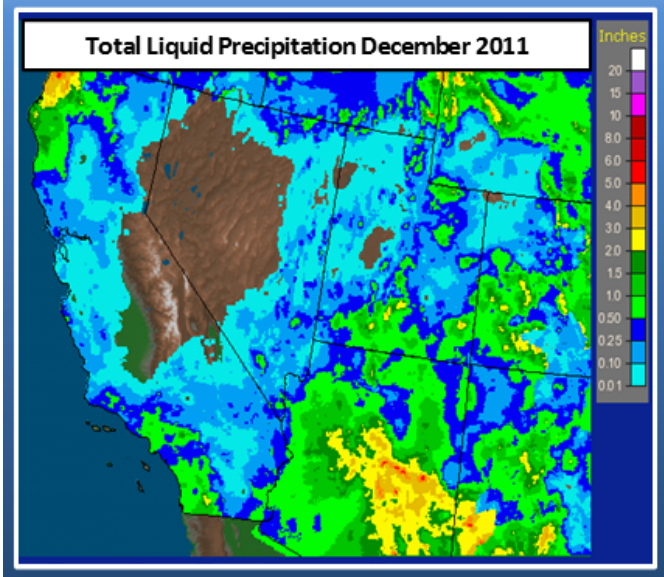
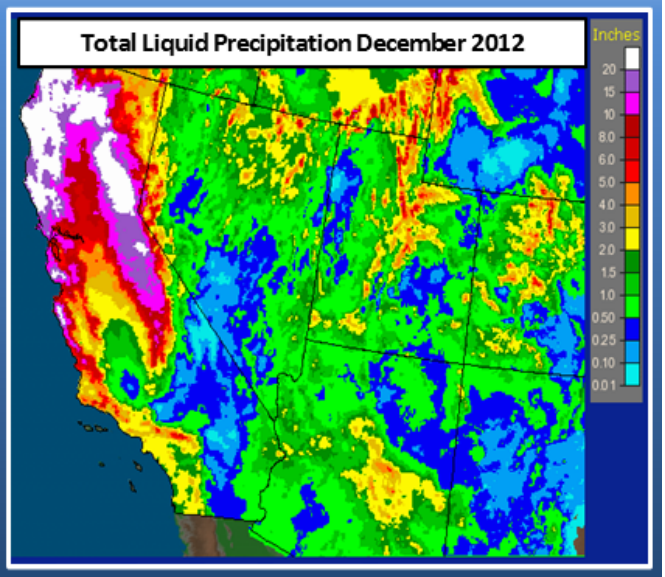
THE GOLD AND SILVER SPOTTER
National Weather Service, Reno, NV
Winter 2012-2013

Winter 2012-2013 Off to a Great Start

Last Winter Vs. This Winter





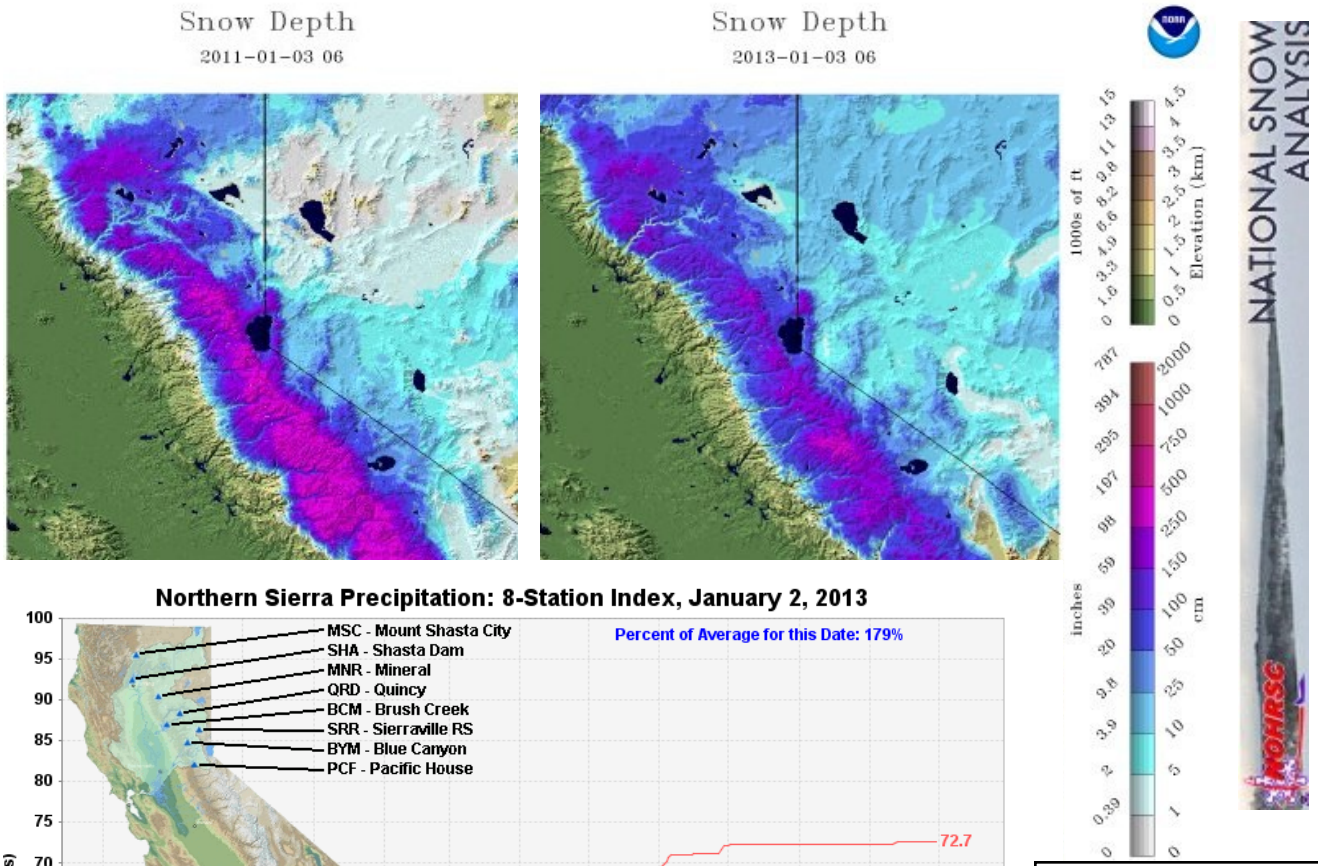
December Snowfall 2011	
Reno Airport	0.0"
Tahoe City	0.0"
Mammoth Lakes	0.0"

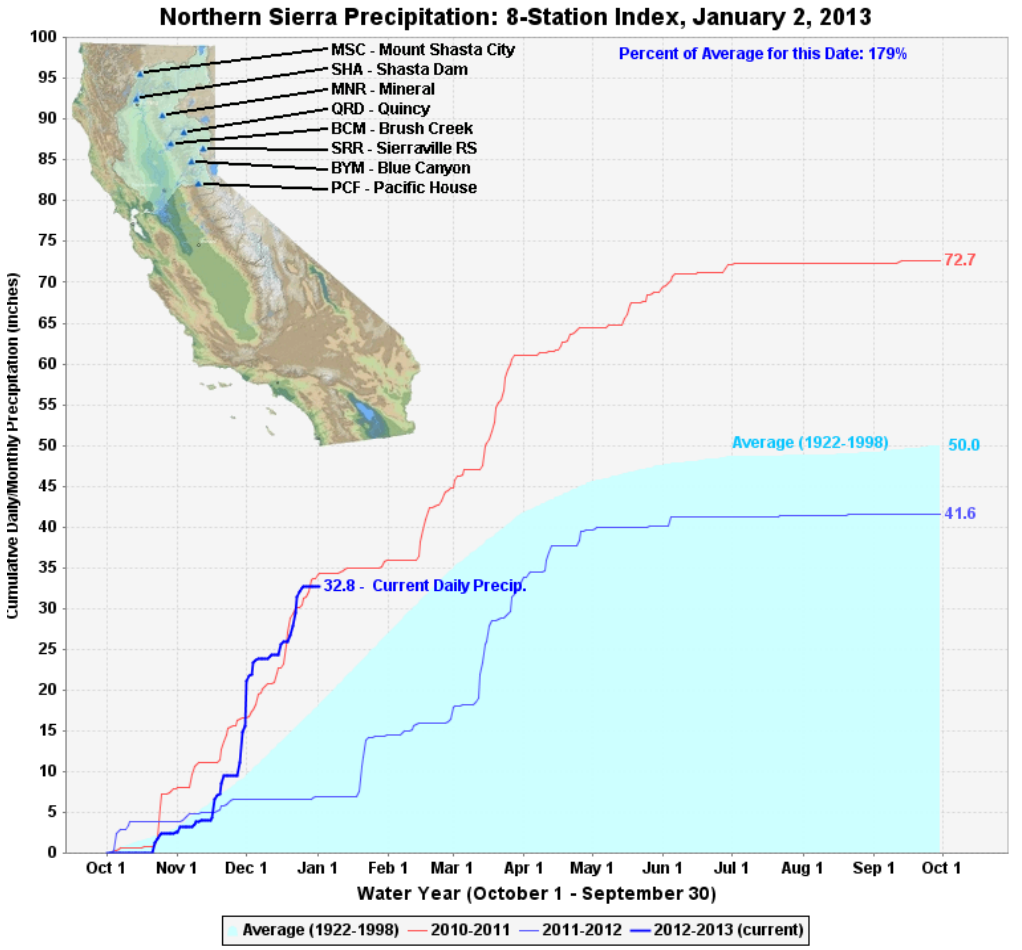
December Snowfall 2012	
Reno Airport	4.7"
Tahoe City	42"
Mammoth Lakes	49"

The above graphics are comparing the precipitation in December 2011 with the precipitation for December 2012. The image on the left represents the total liquid precipitation that fell during December 2011. The image on the right is the total liquid precipitation that fell over the last 30 days of 2012 ending on December 28th. The images show the stark contrast between the exceptionally dry December of 2011 and the very wet December of 2012. As of December 28th the snow water equivalent (total water in the snowpack) in the Truckee River basin is 204 percent and 169 percent of normal in the Lake Tahoe Basin.

Inside this issue:

How Does this Winter Compare So Far to the Big Winter of 2010-2011?





The two top images are comparing the snow depth from 1/3/2011 to 1/3/2013. You can see that there was a bit more snow in the Sierra at this point two years ago, but it is close. This year there has been more snow in Western Nevada. The graph on the left is showing an 8 station average for snowfall in the Northern Sierra. Under the light aqua colored curve is the 1922-1998 average. The red line represents the 2010-2011 winter, with the current winter in the dark blue line. The lighter blue line is last year's dry winter for comparison. Click on images to go to associated websites.

CoCoRaHS!

Are you crazy about weather? Do you want to help your local community by providing valuable weather information that will aid in the protection of both lives and property? If so, we have a great program for you! CoCoRaHS, or the Community Collaborative Rain, Hail, and Snow Network (cocorahs.org).

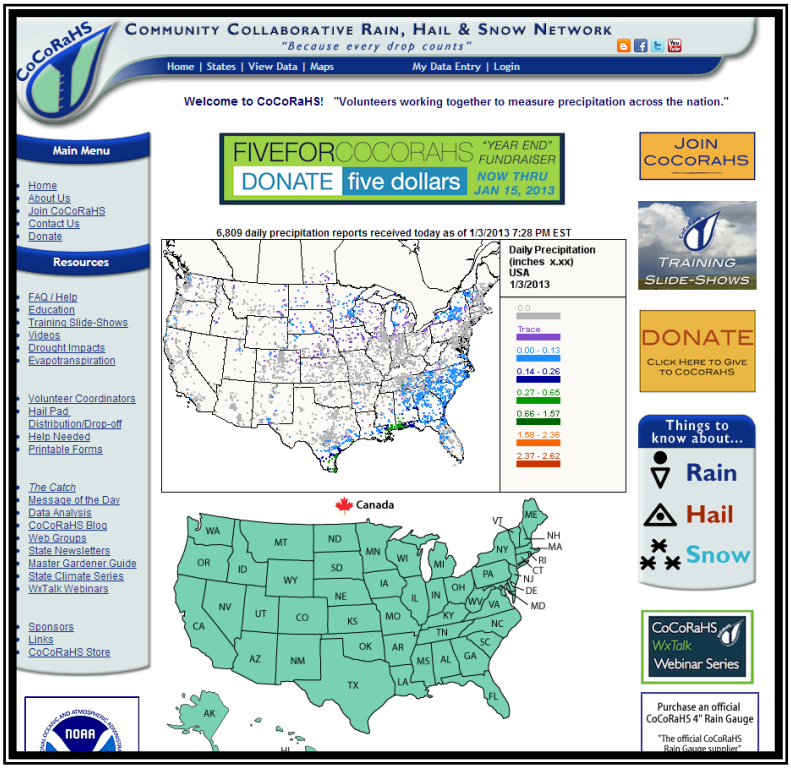
CoCoRaHS is a nationwide, nonprofit group of volunteers who take daily measurements of rain, hail, and snowfall, and post their data online for a variety of organizations to view and utilize. The program began after a devastating flash flood hit Fort Collins, Colorado in July 1997. Five people were killed, and over $200 million worth of damages occurred as a result of this disaster. CoCoRaHS (established by the Colorado Climate Center at Colorado State University) was born from this disaster in order to provide scientists, local emergency managers, and the public with critical, sometimes lifesaving information regarding precipitation in their area.

A variety of organizations benefit from the CoCoRaHS network. For example, your local National Weather Service office in Reno, NV will use the data to aid in decisions on the issuance of watch and warning products for potentially life threatening weather, as well as to help us verify our forecasts, and for research in order to gain a better understanding of the local weather patterns that affect Eastern California and Western Nevada. Local emergency managers can also use the data to prepare for potential disasters in their communities, thereby saving both lives and property. Other groups that use and benefit from CoCoRaHS data include individuals who make water management and irrigation decisions, engineers, insurance adjusters, the United States Department of Agriculture, mosquito control personnel, ranchers and farmers, and schools.

Volunteers for the program do not have to be current weather spotters for the National Weather Service. Therefore, this is an ideal program for your friends, neighbors, and even local school or scouting groups to participate in. A short training presentation is provided on the website (www.cocorahs.org) under the link "Training Slide Show". You can view the training slide show before joining CoCoRaHS in order to get an idea of what is required of volunteer observers.

CoCoRaHS is a community based volunteer project and differs from the spotter program because reports are made daily, even if there was no precipitation measured. Anyone with an enthusiasm for weather and a desire to serve their local community can participate. All that is required is internet access, and a rain/snow gage (which can be purchased through CoCoRaHS . For additional details on the program, contact Katherine Hohmann:

Katherine.Hohmann@noaa.gov.



Stay Safe With a Winter Weather Kit

Be prepared before a storm strikes! Fully winterize your vehicle before winter season begins. It's also a good idea to carry a Winter Storm survival kit. This can include:

- Cell phone with a charger
- Blankets/sleeping bags
- Flashlight with extra batteries
- First Aid Kit
- Knife
- High-calorie, non-perishable food
- Extra clothing to stay dry

- Large, empty can to use as an emergency toilet. Tissues and paper towels for sanitary purposes.
- Small can and waterproof matches to melt snow for drinking water
- Sack of sand or cat litter for traction

- Shovel
- Windshield scraper and brush
- Tool Kit
- Tow Rope
- Battery booster cables
- Water container
- Compass and road maps

At home and at work the primary concerns are loss of heat, power, telephone service, and a shortage of supplies during a prolonged storm. It is a good idea to have the following items on hand:

- Flashlight with extra batteries
- A portable radio and/or NOAA Weather Radio to receive emergency information as these may be your only links to the outside during a significant winter storm.
- Extra food and water—high energy food that doesn't require cooking or refrigeration
- Extra medical supplies and baby items if necessary
- First-aid supplies
- Emergency heat source such as a fireplace, wood stove, or space heater (make sure to properly ventilate and to use the necessary precautions to prevent a fire or smoke inhalation)
- Fire extinguisher and a smoke alarm
- Don't forget your animals!
    - Move animals to sheltered areas
    - Make sure they have plenty of food and water available

How to Properly Measure Snowfall

Please help us with snow measurements!

What you're providing:

Snowfall information during and after a storm.

What you'll need:

1. A snow-board (a 2x2 ft plywood board or a plastic cutting board) with a ruler ex tending up from the center
   -If this is not possible, try to measure snowfall in the most flat, and most representative area possible. Be sure to move snow away from your measurement location to see whether the snow is resting on top of grass, so the depth of the grass is not included in the measurement. Avoid pavement or con crete, and high traffic areas.

2. If using a snow-board, place the board in a flat area at least 10 feet away from tall objects.

3. Measure several spots on the board (to the closest 1/10th of an inch), then take an average of these measurements.

4. Once the measurement is taken, clean off your snow-board and place on top of the snow remaining on the ground.

Some issues that you might face...

1. **Wind** accompanies the storm and blows your snow-board, or measurement area, bare, while piling snow in other locations.
   -If this occurs, try to find an area that seems representative of the snowfall. This will probably be in a location that is not terribly drifted. Also, take several measurements, then average the results. Try the best you can as in this scenario getting a very accurate result is quite difficult.

If you don't have a snowboard...

1. Measure snow in a relatively flat area

2. Measure in several different spots

3. Average your snowfall total

More Snowfall Measurement Details

There are three values that should be recorded when reporting frozen precipitation: snowfall, snow depth, and snow water equivalent. Snowfall is the amount of snow that has fallen since the previous observation. Snow depth is the total depth of snow, sleet, or ice on the ground at the time of observation. Snow water equivalent is a measure of the amount of water in a sample of melted snow.

Snowfall measurements are to be taken at least once every 24 hours, or when the storm is over; whichever comes first. Snowfall is a measurement of the average depth of new snow that has occurred since the last measurement, and is measured in whole inches and tenths (4.1, for example). Always clear the snowboard after the observation is taken.

Snow depth can be reported when reporting new snowfall and is rounded to the nearest whole inch. Snow depth measurements are taken from either a permanently mounted snow stake or from the average of several locations where the snow has been undisturbed (least affected by the wind or obstacles). If faced with a situation where part of the location is bare, and part is snow covered, take an average of the bare ground (0 inches) and the snow covered ground. If less than half of the location is covered by snow, snow depth is recorded as a trace (T), even if significant snow depth still exists in snow covered spots.

If you have an 8-inch standard precipitation gage, snow water equivalent measurements can also be taken when snowfall is reported. Melt what has fallen in the 8-inch gage and then pour this into the standard 2-inch gage and take a measurement using an official NWS rain gage ruler. This goes above and beyond your role as a spotter, and requires specific equipment, so please do not feel you have to take snow water equivalent measurements.

What we find the most important at the NWS office is getting new snowfall reports with details as to when the snow began and ended. Also, if the precipitation type changes (i.e. from rain to snow) it is also good to give us a call and report this, so we have a better understanding of what is happening with the storm.

Cold Related Injuries

Wind Chill: How cold it feels to exposed skin, not the actual temperature. As the wind increases, heat is carried away from the body at an accelerated rate, driving down the body temperature. Animals are affected by wind chill; however, cars, plants, and other objects are not.

Frostbite: Damage to the body tissue caused by extreme cold. A wind chill of –20° Fahrenheit will cause frostbite in just 30 minutes. Frostbite causes a loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes, or the tip of the nose. If symptoms are detected, get medical help immediately! If you must wait for help, slowly re-warm affected areas. However, if the person is also showing signs of hypothermia, warm the core of the body before extremities.

Hypothermia: A condition brought on when the body temperature drops to less than 95°F. It can kill. For those who survive, there are likely to be lasting kidney, liver, and pancreas problems. Warning signs include uncontrollable shivering, memory loss, disorientation, incoherence, slurred speech, drowsiness, and apparent exhaustion. Seek medical care immediately!

If Medical Care is not Available: Warm the person slowly, starting with the body core. Warming the arms and legs first drives cold blood toward the heart and can lead to heart failure. If necessary, use your body heat to help. Get the person into dry clothing and wrap in a warm blanket covering the head and neck. Do not give the person alcohol, drugs, coffee, or any other hot beverages or food. Warm broth is the first food to offer.

Adapted from: *Winter Storms: The Deceptive Killers,*
NOAA, FEMA, and the American Red Cross
http://www.weather.gov/os/winter/resources/Winter_Storms2008.pdf

Injuries Related to Cold Stats:

* 50% happen to people over 60 years old
* More than 75% happen to males
* About 20% occur in the home

Social Media

The National Weather Service Reno is in full swing with a variety of social media outlets, including Facebook, Twitter, and now YouTube! Many of you are liking, following, and subscribing to our posts and we appreciate the support. Please spread the word and we hope that you enjoy this new avenue in which you can receive the latest weather information! As always, our products, graphics, and video briefings can always be found our website as well.

Find us on Facebook

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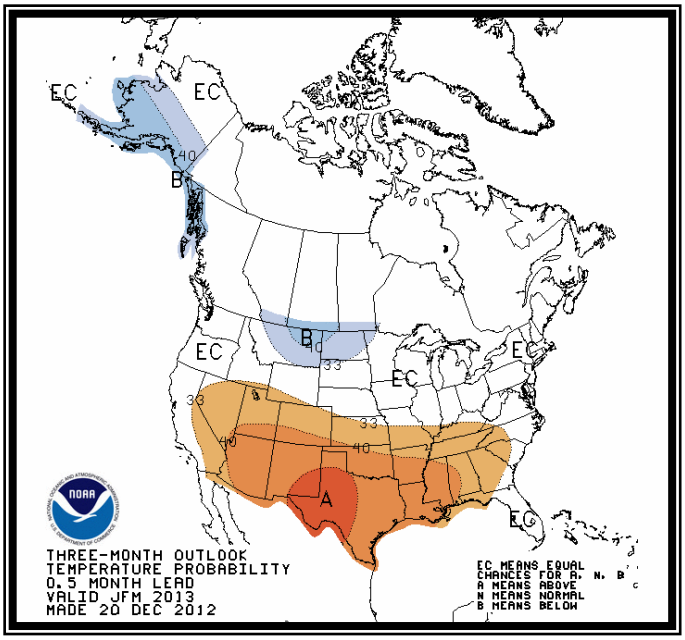
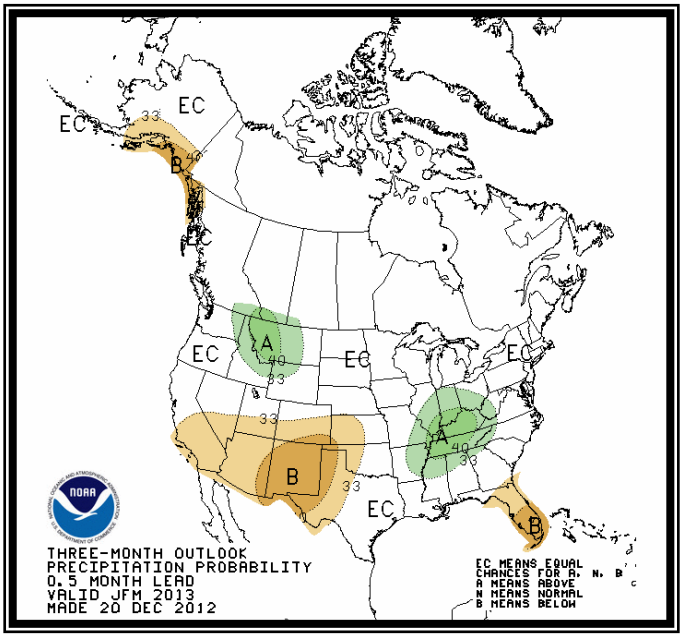
Interested in a 2012 Year in Review? Click:

CPC Outlooks





The Climate Prediction Center (CPC) 3 month outlooks for the months of January, February and March 2013 are indicating better than normal chances for above average temperatures and equal chances for above, below, or normal precipitation.

National Weather Service

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Winter Reporting

While it is always important to report significant weather year-round, this time of year we would especially like:

- Snow reports: How much fell and in how long of a period as well as current snow depth if applicable
- Heavy rain and/or any flooding
- Strong and gusty winds above 45 mph
- Freezing rain or freezing drizzle
- Low visibility due to any weather phenomenon such as heavy rain/snow or fog